

Non-Construction Alternatives

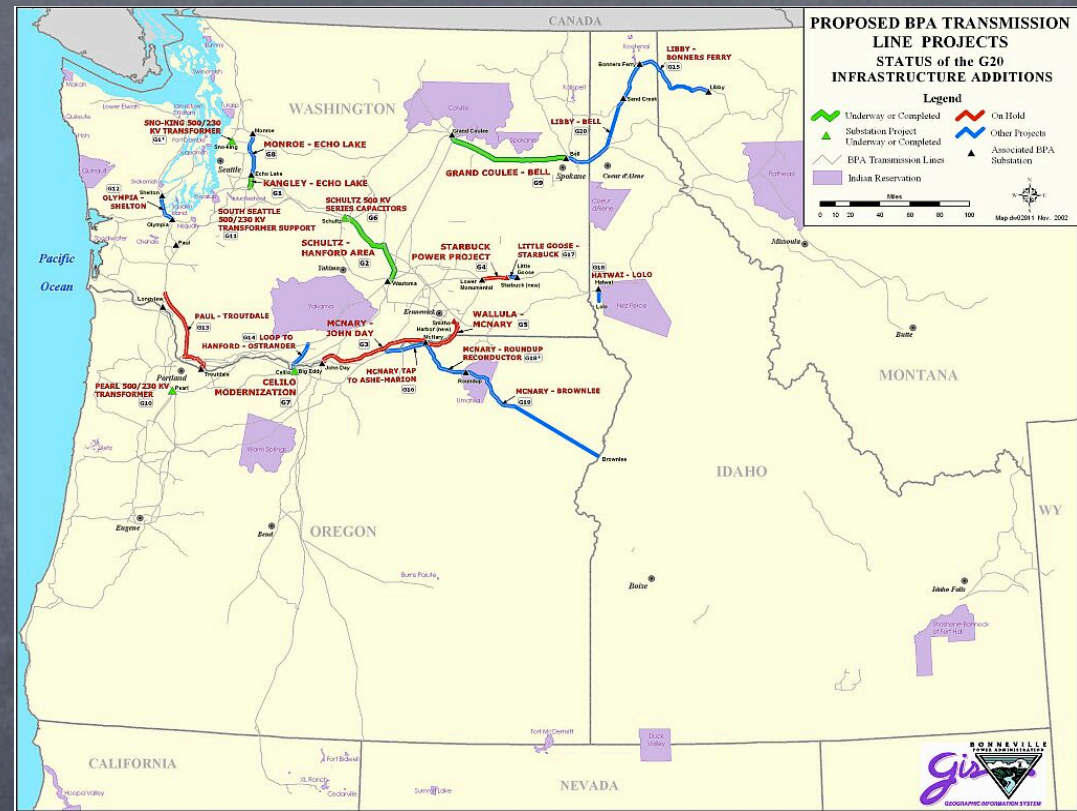
Plan of Analysis and Findings To-Date

Presentation Outline

- Three Lines
 - Locations
 - Line Diagrams
 - Issues
- Current Status
- Olympia Findings
- Overarching Issues

Plan of Analysis

- Three Areas
 - Olympic Peninsula
 - Southern Idaho
 - Jackson Hole, Wy.



Olympic Peninsula

Fairmount

Service

69kv

Port
Angeles

South
Bremerton



115kV

Kitsap

Shelton
230kV

S. Shelton W

15 mi

230kV



Satsop

230kV

W

W

Olympia

White Rv
Coulee

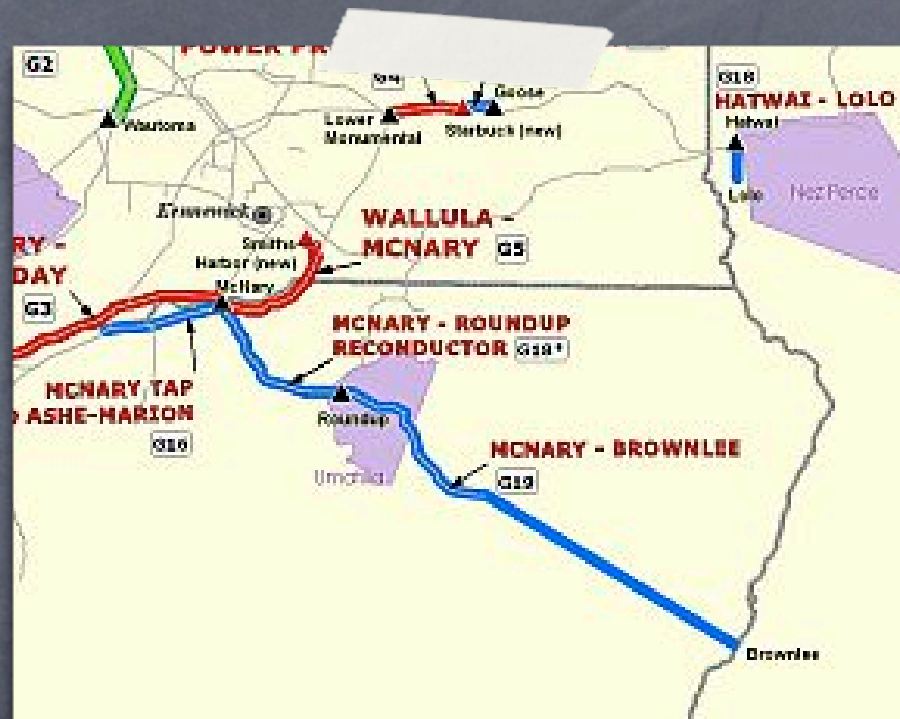
6 mi

500kV

Paul

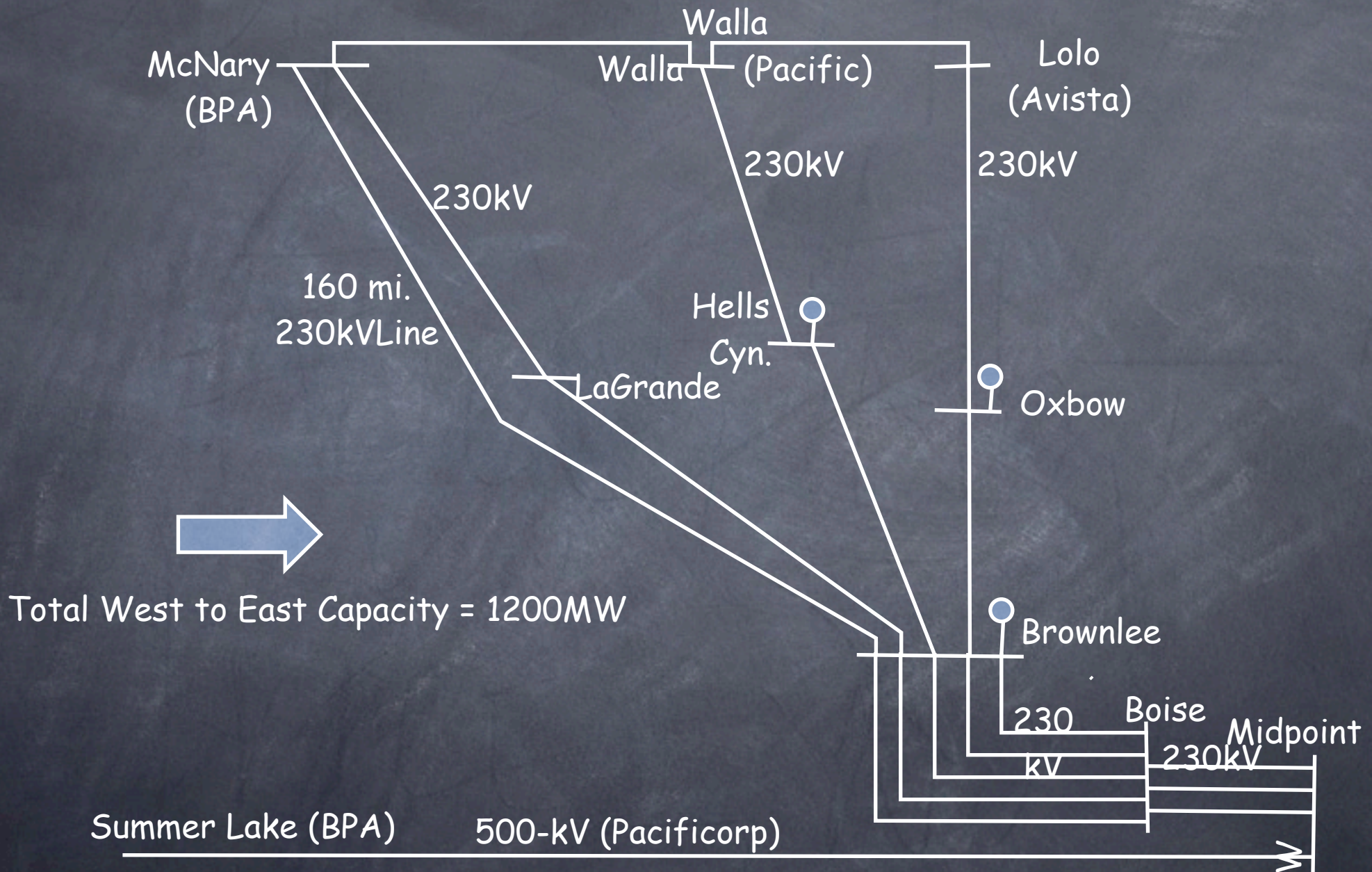
Olympic Peninsula Service Issues

- Winter Peaking
- Voltage Stability Problem
- Problem today for several multiple contingencies
- Problem for single contingencies in about 5 years



McNary Brownlee

McNary-Brownlee 230-kV Line



McNary Brownlee Service Issues

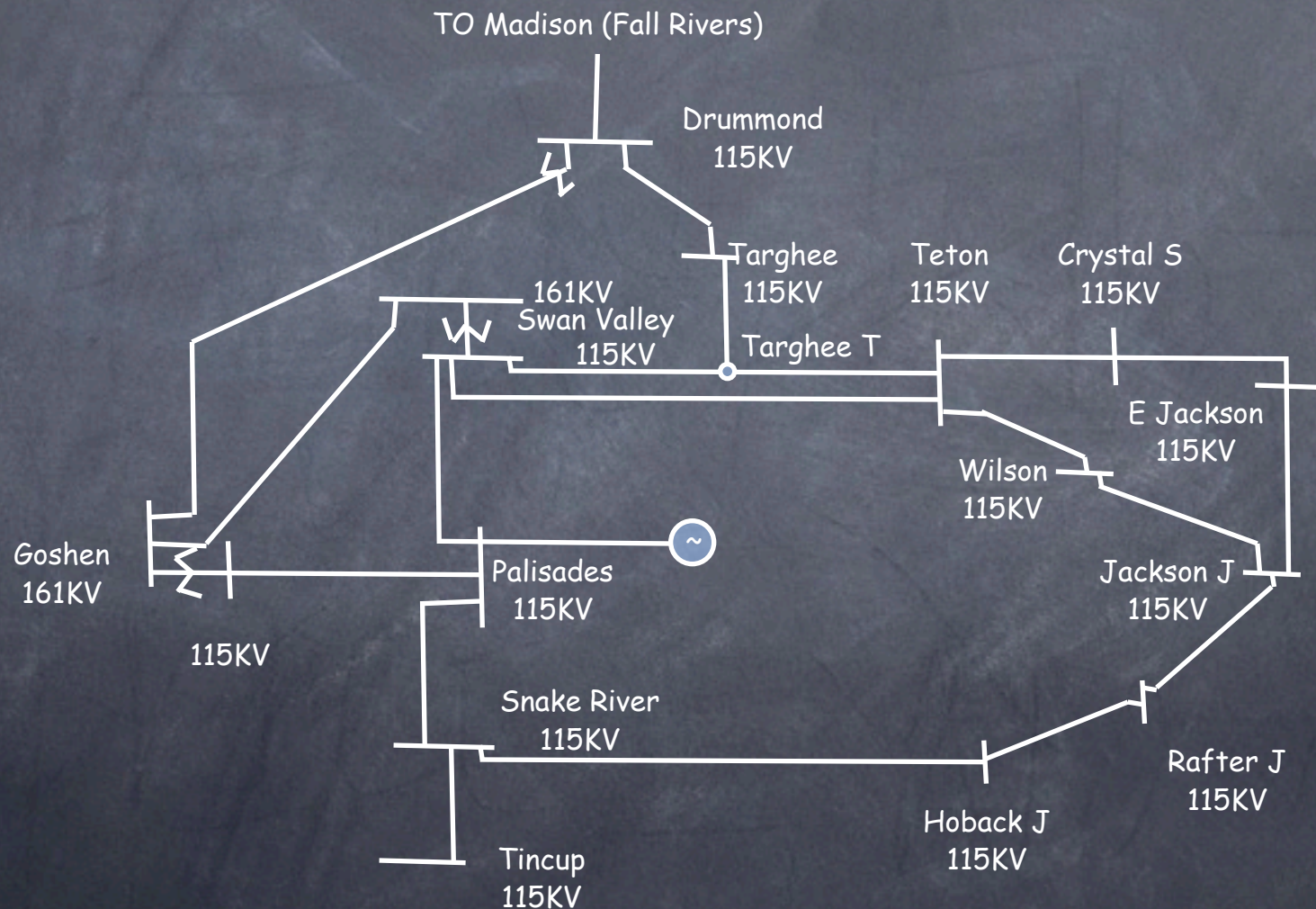
- Summer Peaking
- BPA has 350MW of 1200MW total transfer capacity
- BPA Southern Idaho loads nearing allocation capacity

(Burley, Wells, Baker & US Bureau of Reclamation)



Lower Valley

Lower Valley Service



Lower Valley Service Issues

- Winter Peaking
- Voltage Collapse (facility loss)
- Exceed Thermal Capacity
- Load restoration problematic (weather)

Current Status

- Just now getting underway
 - Energy Environment Economics
 - Training, Excel Models, Parallel Work
- Internal Team of 10
- First Analysis - Olympic Peninsula

Olympia Findings

(so far - VERY early yet)

- Demand Response: least cost; can't provide entire solution
- Conservation: most expensive; hampered in part by short line delay period
- Still Assessing: load control; distributed generation

Over-arching Issues

- Loss Savings
- Sensitivity Analysis
- Cost Tests

Sensitivity Analyses:

- Load Forecasts
- Construction Cost Estimates
- Measure Costs and Penetration

Cost Test Perspectives

Test	Addresses	Societal	Utility
UCT	Revenue Requirements	Narrow - Undervalues benefits to others	Current Practice - PVRR
RIM	Rate Impact	Predatory Test for Energy Efficiency	Rates Impact Important
TRC	Total Resource Cost (utility + consumer)	Reasonable - but ignores environment	Better for who
Societal	Comprehensive	Least Cost for Society	Requires Utility Rates to Implement Social Policy
Participant	Participant direct costs vs benefits	Too Narrow - must include all reasons	Useful to estimate adoption rate

Viewpoint Extremely Important